



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/849,523

05/20/2004

Yoshinori Uzuka

1075.1263

5577

21171 7590 04/22/2008
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

PATEL, DHIRUBHAIR

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

04/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/849,523	Applicant(s) UZUKA ET AL.	
	Examiner DHIRU R. PATEL	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

A person shall be entitled to a patent unless --

1. Claims 1, 10-11, 13,15,17 and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by (Sanftleben et al (6,614,108).

Sanftleben et al disclose:

Regarding claim 1, a spacer 36,40 for attaching onto a printed wiring board 14 to which is fixed an electronic component 32 having a component package 10, on one of whose surfaces a connection terminal is arranged (see figured 1-2 and entire columns 1-8), said spacer comprising a single-piece elastic member with no ends thereof (see figs 1-2 and entire columns 1-8), said elastic member being detachably attached to the printed wiring board in such a way as to enclose the electronic component to seal a gap between the electronic component and the printed wiring board (see figs 1-2 and entire columns 1-8), and said elastic member being attached to and detached from the printed wiring board on which the electronic component is fixed, by exploiting elastic deformation of said elastic member (see entire columns 2-8), and please note that Sanftleben et al disclosed that improvement indicates the importance of mechanically decoupling the circuit boards and their cases

with a gel 36 of this invention (see column 6 lines 55-59) as well as disclosed that it also provides a mechanical slip plane that helps mechanically decouple the circuit board 14 from the case (see column 3 lines 34-40).

Regarding claim 10, the assembly of Sanftleben et al disclose all the features of the claimed invention as shown above, including said elastic member, while in contact with the printed wiring board, is attached around the component package by pressure due to the elastic deformation of said elastic member (see figures 1-2 and entire columns 1-8I).

Regarding claim 11, the assembly of Sanftleben et al disclose all the features of the claimed invention as shown above, including said elastic member has a cross-sectional shape with a projecting portion thereof, which projects into the gap between the electric component and the printed wiring board when said elastic member is attached to the printed wiring board (see figures 1-2I).

Regarding claim 13, a printed circuit board, comprising:

an electronic component 32 having a component package 10, on one of whose surfaces a connection terminal is arranged (see figures 1-2 and entire columns 1-8); a printed wiring board 14 to which said electronic component is fixed; and a spacer 42 formed as a single-piece elastic member with no ends thereof detachably attached to said printed wiring board in such a way as to enclose said electronic component to seal a gap between said electronic component and said printed wiring board (see figs 1-2), said elastic member being attached to and detached from said printed wiring board on which said electronic component is fixed by exploiting elastic deformation of the elastic member (see figures 1-2 and entire columns 1-8), and please note that Sanftleben et al disclosed that improvement indicates the importance of mechanically

decoupling the circuit boards and their cases with a gel 36 (see column 6 lines 55-59) as well as disclosed that it also provides a mechanical slip plane that helps mechanically decouple the circuit board 14 from the case (see column 3 lines 34-40). Regarding claim 15, the assembly of Sanftleben et al disclose all the features of the claimed invention as shown above, including in contact with said printed wiring board, is attached around the component package by pressure due to the elastic deformation of the elastic member (see figures 1-2 and entire columns 1-8).

Regarding claim 17, Electronic equipment, comprising a printed circuit board 14 which includes: an electronic component 32 having a component package 10, on one of whose surfaces a connection terminal is arranged; a printed wiring board to which the electronic component is fixed; and a spacer 36, 42 formed as a single-piece elastic member with no ends thereof detachably attached to the printed wiring board in such a way as to enclose the electronic component to seal a gap between the electronic component and the printed wiring board, the elastic member being attached to and detached from the printed wiring board on which the electronic component is fixed, by exploiting elastic deformation of the elastic member (see figures 1-2 and entire columns 1-8), and please note that Sanftleben et al disclosed that improvement indicates the importance of mechanically decoupling the circuit boards and their cases with a gel 36 (see column 6 lines 55-59) as well as disclosed that it also provides a mechanical slip plane that helps mechanically decouple the circuit board 14 from the case (see column 3 lines 34-40).

Regarding claim 19, the assembly of Sanftleben et al disclose all the features of the claimed invention as shown above, including the elastic member, while in contact with the printed wiring board, is attached around the component package by pressure due to

Art Unit: 2831

the elastic deformation of said elastic member (see entire columns 1-8 and figures 1-2 of Sanftleben).

Note: claims 1, 10-11, 13, 15, 17 and 19 can be rejected as 103 rejections using main reference 7,119,430 and teaching reference 6,614,108.

Allowable Subject Matter

2. Claims 2 -9, 12, 14, 16, 18 and 20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reasons for the indication of the allowability of claims 2-9, 12, 14, 16, 18 and 20 are the inclusion therein, in combination as currently claimed, of the limitation of wherein said elastic member has a frame- like shape with an inner outline which is similar in shape to an outline of the component package, and is smaller in length than the outline of the component package, and is thinner than the gap between the electronic component and the printed wiring board (for claims 2, 4,6, 8), and wherein said elastic member has a frame-like shape with an inner outline which is similar in shape and length to an outline of the component package and is thinner than the gap between the electronic component and the printed wiring board, and wherein the frame-like shape has a pair of hook portions for projecting into the gap between the electronic component and the printed wiring board, the hook portions being provided on the inner outline of the frame-like shape to oppose to each other (for claims 3, 5,7,and 9), and wherein the elastic member has a frame-like shape with an inner outline which is similar in shape to an outline of the component package, and is smaller in length

Art Unit: 2831

than the outline of the component package, and is thinner the gap between the electronic component and said printed wiring (for claim 14), and wherein the frame-like shape has a catch protrusion on its inner outline, which catch protrusion protrudes into the gap between the electronic component and said printed wiring board (for claims 12 16 and 20.

The previously listed limitation is neither disclosed nor taught by the prior art of record, alone or in combination.

Other prior art cited

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, Messina disclose a elastic member being attached to and detached from a printed wiring board similar to applicant's claimed invention.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 10-11, 13, 15, 17 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DHIRU R. PATEL whose telephone number is 571-272-1983. The examiner can normally be reached on M-TH, 6:30 TO 4:00.

Art Unit: 2831

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DHIRU R PATEL/

Primary Examiner, Art Unit 2831